



Photo: The Richel in the Netherlands holds by far the largest breeding colony in the Wadden Sea area. White dots are young pups, adult and newly weaned animals are darker animals. S. Brasseur.

## TSEG grey seal surveys in the Wadden Sea and Helgoland in 2017-2018

### More than ten years of growth in the Wadden Sea area

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## Introduction

The coordinated aerial, boat and land surveys of the Dutch, German and Danish Wadden Sea areas and Helgoland (Germany) aim to record annual changes in numbers of grey seals (*Halichoerus grypus*). The numbers of pups born in winter are indicative of changes in the local breeding population, while the total counts during the moulting season in spring include animals that might have bred elsewhere and have redistributed during the post breeding period. Results of the counts do not yield an absolute or maximum number of seals, but a number that can be compared from year to year to establish statistical trends in the population size and development.

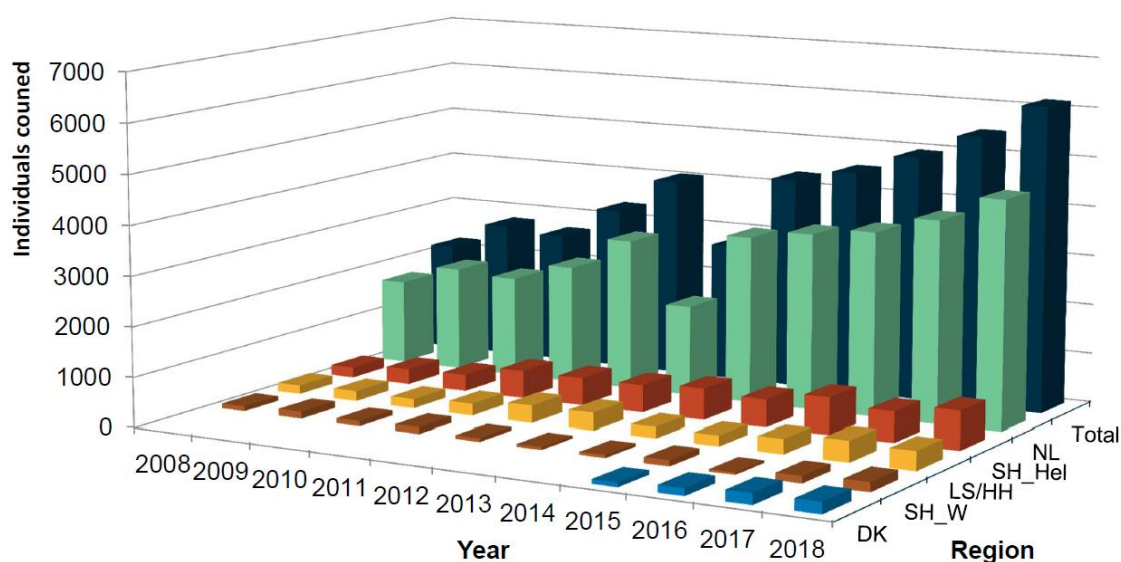


Figure 1. Total number of grey seals counted in the Wadden Sea during the moult, as well as numbers broken down by region, for 2008-2016 (DK= Denmark, SH\_W= Schleswig-Holstein West Coast, LS/HH= Lower Saxony/ Hamburg, SH\_Hel= Schleswig-Holstein Helgoland, NL= Netherlands).

## Results and interpretation

The total number of pups counted in the area in one survey in the winter of 2017-2018 amounted to 1,377 pups. As pups are not born exactly at the same time, the reported numbers represent an index for the pup production, not the total pup production. This is demonstrated in the counts on Helgoland, where individual pups can be followed daily as the breeding site can be accessed from land. There, a total of 426 births was recorded throughout the whole breeding season. However, during the peak count in mid-December, used for this report, 322 pups were counted. The pups that were not recorded on that day were either already weaned and had left Helgoland, had died or were not born yet.

Compared to the winter of 2016-2017, the total numbers of pups counted in the Wadden Sea area increased by 8 %. In Denmark no pups were recorded, during the coordinated count, though one pup was observed later in the season. Pup numbers on Helgoland increased by 12 % to a count of 322 and 6 pups were counted in the Wadden Sea area of Schleswig-Holstein. In Lower Saxony/Hamburg pup numbers increased by 15 % to 228 pups. For practical reasons only one breeding site (the Kachelotplate) is surveyed in this area. Up until now, there is no indication of regular births elsewhere in the region. In the Netherlands 821 pups were counted, an increase of 3 %. In this area, the great majority, over 85 %, are born at one site (the Richel), though it seems that slowly a growing number of other sites are being used as breeding grounds. With a change in public behaviour, leaving breeding seals alone rather than taking them to rescue centres, an increasing number of grey seals will potentially breed on the main islands where they may be less affected by storms.

The number of grey seals counted in Denmark during the moult in 2018 increased by 3 % compared to 2017 and amounted to 228. On Helgoland the numbers increased by 27 % to 780 animals, and the trend in the counts seem to have normalised after last year's drop. In the Schleswig-Holstein part of the Wadden Sea, the number of grey seals hauling out during the moult grew to 188 animals (+33 %). In Lower Saxony/Hamburg, a decrease to 383 seals (-9 %) was observed. Here too it seems to be a stabilisation compared to the very high counts of 2017 rather than a downward trend. In the Netherlands, numbers of grey seals during the moult grew to a maximum count of 4,565 (+13 %). The total number of grey seals in the Wadden Sea area during the moult counts in 2018 increased by almost 13 % compared to 2017 and amounted to 6,144 grey seals (Figure 1). Looking back, it seems that the low count in 2013 (Brasseur et al. 2013) indeed was a temporary drop in animals on the haul-outs rather than a change in population trend. In all, the growth in numbers of grey seals is relatively high, and probably still represents a mix of local recruitment (seals born in the area) and an influx of animals coming from the UK to moult (Brasseur et al. 2015). As it gradually drops, the growth rate in numbers of grey seals in the Wadden Sea is approaching those found in grey seals in Canada which averaged 12.8 % over 40 years (Bowen et al. 2003).

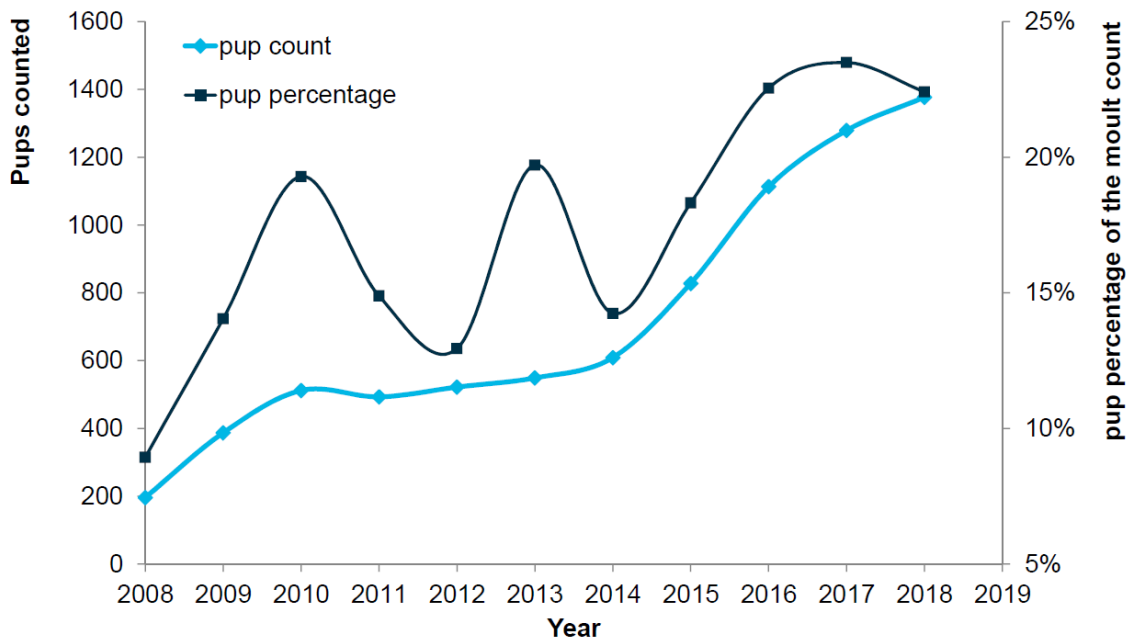


Figure 2. Number of pups counted in the Wadden Sea (red line, right vertical axis) in the years 2008-2015. The number of pups as a percentage of the total moult count is given by the blue line (left vertical axis).

## References

- Bowen WD, McMillan J, Mohn R (2003) *Sustained exponential population growth of grey seals at Sable Island, nova Scotia*. *Ices Journal of Marine Science* 60:1265-1274
- Brasseur SMJM, Diederichs B, Czeck R, Jensen LF, Galatius A, Ramdohr S, Siebert U, Teilman J (2013) *Trilateral Seal Expert Group (TSEG). Aerial surveys of grey seals in the Wadden Sea in 2012-2013: Mixed messages*. Book 2013. Common Wadden Sea Secretariat (CWSS). [http://www.waddensea-secretariat.org/sites/default/files/downloads/TMAP\\_downloads/Seals/aerial\\_surveys\\_of\\_grey\\_seals\\_in\\_the\\_wadden\\_sea\\_in\\_the\\_season\\_of\\_2012-13.pdf](http://www.waddensea-secretariat.org/sites/default/files/downloads/TMAP_downloads/Seals/aerial_surveys_of_grey_seals_in_the_wadden_sea_in_the_season_of_2012-13.pdf)
- Brasseur SMJM, van Polanen Petel TD, Gerrodette T, Meesters EHWG, Reijnders PJH, Aarts G (2015) *Rapid recovery of Dutch grey seal colonies fueled by immigration*. *Marine Mammal Science* 31:405-426